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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,500	09/15/2003	Nathaniel Bair	67102-013	9191

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EXAMINER

THOMAS, COURTNEY D

ART UNIT	PAPER NUMBER
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2882

MAIL DATE	DELIVERY MODE
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08/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/662,500	BAIR, NATHANIEL	
	Examiner	Art Unit	
	Courtney Thomas	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-24 is/are allowed.
- 6) ☒ Claim(s) 1-20 and 25-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, X-ray detector movable relative to the gantry (see claim 11) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 12, 13, 25, 33 and 34-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Virta et al. (WO 9917659).

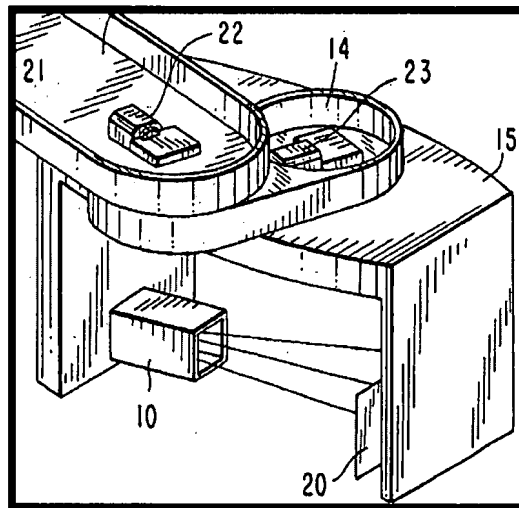


Fig.4 – X-ray scanner – WO 9917659 to Virta et al.

6. As per claims 1, 25, 33 and 34-39, Virta et al. disclose a computed tomography scanner (and corresponding method) comprising: a gantry (15); an X-ray source (10) mounted to the gantry; an X-ray detector (20) mounted to the gantry opposite the X-ray source (10); and a motor (23) mounted to the gantry. [Examiner note: see Figs. and respective portions of specification for additional apparatus details and methodology not shown above].

7. As per claim 2, Virta et al. disclose a computed tomography scanner comprising a mounting plate (14).

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8. As per claims 12 and 13, Virta et al. disclose a computed tomography scanner wherein the gantry includes a housing in which the X-ray source (10) is at least partially mounted and wherein the source is a cone beam X-ray source (see Fig. 4 above).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-7, 9, 14, 10, 15, 17-19 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virta et al. (WO 9917659) in view of Suzuki et al. (U.S. Patent Application Publication 2001/0021244).

11. As per claims 5-7 and 9, Virta et al. disclose a computed tomography scanner as recited in claim 1, but do not explicitly disclose a scanner including a computer mounted to the gantry, such that the computer rotates with the gantry; sends signals the motor to control rotation of the gantry; controls the X-ray source and processes images collected from the detector.

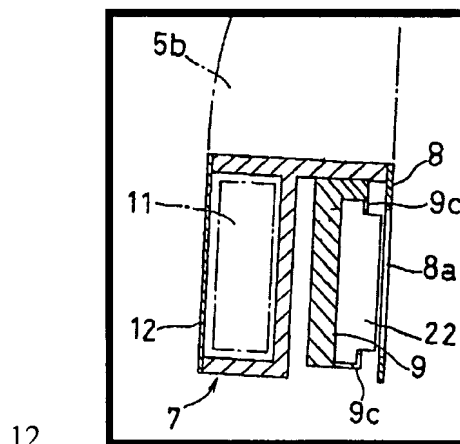


Fig. 3 – X-ray scanner – U.S. Patent Application Publication 2001/0021244 to Suzuki et al.

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13. Suzuki et al. disclose a scanner including a computer (11) mounted on a gantry (5) such that the computer (11) rotates with the gantry (5) and sends signals the motor to control rotation of the gantry (para. [0098] - 11m - not shown above); controls the X-ray source (11d- not shown above) and processes images collected from the detector (11e – not shown above). Suzuki et al. teach that such construction provides a means of operating a scanner via the gantry.

14. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner of Virta et al. such that it incorporated a computer mounted to the gantry, such that the computer rotates with the gantry; sends signals the motor to control rotation of the gantry; controls the X-ray source and processes images collected from the detector. One would have been motivated to make such a modification for the purpose of providing a means of operating a scanner via the gantry as suggested by Suzuki et al. (para. [0098]).

15. **As per claim 14**, Virta et al. disclose a computed tomography scanner comprising: a gantry (15); an X-ray source (10) mounted to the gantry; an X-ray detector (20) mounted to the gantry opposite the X-ray source (10). Virta et al. do not explicitly disclose a scanner comprising a computer mounted to the gantry.

16. Suzuki et al. disclose a scanner including a computer (11) mounted on a gantry (5) such that the computer (11) rotates with the gantry (5).

17. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner of Virta et al. such that it incorporated a computer mounted to the gantry. One would have been motivated to make such a modification for the

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purpose of providing a means of operating a scanner via the gantry as suggested by Suzuki et al. (para. [0098]).

18. **As per claims 10, 18, 27-28, 31 and 32**, Virta et al. as modified above, do not explicitly disclose a scanner (and corresponding method) wherein the computer creates a three dimensional model based on collected images. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the scanner of Virta et al. such that the computer creates a three dimensional model based on collected images. One would have been motivated to make such a modification for the purpose of creating volumetric images of an object of interest as is currently practiced in the radiographic art.

19. **As per claims 15 and 17**, Virta et al. as modified above, disclose a scanner wherein the computer controls the X-ray source and wherein the computer processes images collected from the X-ray detector.

20. **As per claims 19, 29 and 30**, Virta et al. as modified above, do not explicitly disclose a scanner and corresponding method comprising a wireless transmitter on a gantry configured to transmit 3D images. It would have been obvious to one having ordinary skill in the art at the time the invention was made modify the scanner (and method) of Virta et al. such that it incorporated a wireless transmitter for wireless transmission of image data. One would have been motivated to make such a modification for the purpose of transmitting to remote locations without the use of wires as is currently practiced in the radiological arts.

21. Claims 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virta et al. (WO 9917659) and Suzuki et al. (U.S. Patent Application Publication 2001/0021244) in view of Graumann (U.S. Patent 6,496,558).

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22. **As per claims 11 and 16**, Virta et al. as modified above disclose a computed tomography scanner, but do not explicitly disclose the X-ray detector is movable relative to the gantry and/or the computer controls the movement of the detector.

23. Graumann teaches a scanner wherein the X-ray detector (4) is movable relative to the gantry (30) (see Fig. 3; see also column 2, lines 57-65).

24. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the scanner of Virta et al. such that it incorporated a detector movable relative to the gantry. One would have been motivated to make such a modification for the purpose of adjusting the size of acquired images, as taught by Graumann (column 2, lines 57-65).

Allowable Subject Matter

25. Claims 21-24 are allowed.

26. The following is a statement of reasons for the indication of allowable subject matter:

27. **As per claim 21 and dependent claims 22-24**, the examiner found no reference in the prior art that disclosed or made obvious a computed tomography scanner comprising a mount rotatably mounted to the gantry and a motor mounted to at least one of the gantry and the mount, the motor selectively imparting relative motion between the mount and the gantry and including all limitations as recited in independent claim 21.

28. Claims 3-4 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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29. As per claim 3 and dependent claim 4, the examiner found no reference in the prior art that disclosed or made obvious a computed tomography scanner, wherein the motor is fixed to the gantry, such that the mounting plate rotates relative to the motor and gantry and such that the motor rotates with the gantry.

30. As per claim 20, the examiner found no reference in the prior art that disclosed or made obvious a computed tomography scanner, further comprising a mount rotatable relative to the gantry, the computer movable with the gantry relative to the mount.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496.

The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Courtney Thomas
Primary Examiner
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